

NOTES ON WEST INDIAN AND CENTRAL AMERICAN FLEA-BEETLES (HALTICINAE),

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The present paper is composed of miscellaneous notes on various American Halticinae, made in the course of the writer's study, together with descriptions of two new species.

SPECIES OF *HOMOPHOETA* IN THE WEST INDIES AND NORTH AMERICAN CONFUSED WITH *H. aequinoctialis*.

The original description of *Homophoeta aequinoctialis*¹ calls for a beetle the size of *Coccinella bipunctata*, with a red thorax, violet colored elytra marked by four alternating subrotund white spots, and black feet and antennae. It was collected in "America" by Rolander. According to Linnaeus (*op. cit.*, p. A), Rolander collected in Surinam and also in "Eustatium" (probably the island St. Eustatius, about 200 miles east of Porto Rico, where he may have stopped en route to or from South America).

Like many groups of closely related species in other genera of Chrysomelidae, the species of *Homophoeta* are very similarly marked among themselves, and those having four pale spots on each elytron have for the most part been confused under the name *aequinoctialis*. Several definite characters in the brief Linnaean description—the violet colored elytra with four roundish spots, the black legs, and the size, together with the habitat—separate *aequinoctialis* from the two species of *Homophoeta* with similarly marked elytra found in the West Indies. In addition to having entirely black legs, *aequinoctialis* has also a black metasternum, which is not the case in the two other species here discussed. Specimens in the National Museum from Maroni River, French Guiana, collected by William Schaus, and a series from Georgetown, British Guiana, and Trinidad, collected by H. Morrison, fit the Linnaean description perfectly. The species is also represented from Merida, Venezuela, and Bocas del Toro, Panama, but there are no specimens in the National Museum from the West Indies north of Trinidad. (See Fig. 7.)

Two other species of *Homophoeta* with violet colored elytra having four pale spots, but with femora reddish brown instead of

¹ *Chrysomela aequinoctialis* Linnaeus, *Syst. Nat.*, ed. X, 1758, p. 374.

black, and with pale or brown under surface and quite different genitalia, are found in the West Indies. One of these, the elytra of which vary from violet to purplish brown or even reddish brown, has, instead of the postmedian rounded spot near the suture, a nearly linear, oblique, postmedian spot, the anterior end of which is nearest the suture. This species corresponds with Fabricius's description of *albicollis*² from Cayenne. Olivier's figure and description³ under this name do not agree with Fabricius's description or any form known to the author from northern South America, and his species is probably distinct from Fabricius's. *Albicollis* is represented in the National Museum by specimens from Brazil, British Guiana, Trinidad, Barbadoes, Antigua, St. Thomas, St. Croix, Porto Rico, and Dominican Republic. (See Fig. 8.)

The second species found in the West Indies is variable in markings, and has gone under at least two names. A series from Jamaica presents the typical pattern of *aequinotialis* with four rounded spots on the elytra, but has the body entirely pale beneath and reddish instead of black femora. In series from Cuba and St. Thomas the majority of the specimens have entirely blue elytra, but some have one to three inconspicuous spots. The specimens with entirely blue elytra in the series from Cuba and St. Thomas have been determined as *Oedionychis cyanipennis* (Fab.),⁴ type locality, Santo Domingo, and correspond with the description. Although it has not been put in that genus, the pale frontal spot and the projecting apical tooth on the prothorax place *cyanipennis* in the genus *Homophoeta*. This species is represented from the West Indies in the National Museum by specimens from Cuba, Jamaica, Haiti, Dominican Republic, Porto Rico, St. Croix, and St. Thomas. No specimens are in the collection from South America or Trinidad. (See Fig. 5.)

The form of the aedeagus of this last species is identical with that of the species described by Crotch⁵ as *Oedionychis octomaculata*, from Texas. Horn, omitting all reference to the latter name, used the name *Homophoeta aequinotialis* for this North American species. In the Leng catalogue *quadrinotata* Fab. is synony-

² *Chrysomela albicollis*, Fabricius, Mant. Insect., vol. I, 1787, p. 76.

³ Olivier, Entomologie, Vol. 6, 1808, p. 682, pl. 2, fig. 23.

⁴ Fabricius, Suppl. Ent. Syst., 1798, p. 97.

⁵ Crotch. Proc. Acad. Nat. Sci. Phila., vol. 25, 1873, p. 60.

mized under *aequinoctialis*, but *quadrinotata* as described by Fabricius,⁶ from Cayenne, is reddish brown with each of the pale elytral spots surrounded by a dark ring. Nothing like this is before me from the West Indies or north of Mexico. Jacoby also treated it as a synonym of *aequinoctialis* in dealing with the Central American species, but it will probably turn out to be distinct.

Although the West Indian and North American species must be called *Homophoeta cyanipennis* (Fab., 1798), it seems appropriate to retain *octomaculata* Crotch as a varietal name for the form with spotted elytra, which is the only form of this species at present known from the United States.

The following key, in connection with the figures, should serve to distinguish the species.

1. Elytra entirely blue or greenish blue. West Indies but not in the lower Lesser Antilles, Trinidad, or South America.
cyanipennis, typical form
 Elytra deep blue, greenish, purplish brown, or sometimes reddish brown, usually with four pale spots and a pale humeral margin on each elytron.....2
2. Hind femora and metasternum shining black. South America, Trinidad, Panama *aequinoctialis*
 Hind femora and undersurface pale, reddish or brown.....3
3. Median spot on each elytron oblique and linear. South America, Trinidad, West Indies.....*albicollis*
 Median spot on each elytron roundish or pear-shaped, elytra sometimes almost entirely dark with some spots missing or very small. West Indies except lower Lesser Antilles, Florida, Texas*cyanipennis*, var. *octomaculata*

TWO SPECIES OF *DISONYCHA* CLOSELY RELATED TO *D. glabrata*.

In a study of the North American species of *Disonycha*, I have found that the genus can be divided into definite groups composed of species very closely related structurally. *Disonycha glabrata* (Fab.) (Fig. 1) is quite different from any other *Disonycha* found in the United States. It is a wide-spread species, originally described from Jamaica, and occurring throughout Mexico and Central America into South America. In the United States it extends through Texas and the Gulf states as far north as New York and Illinois and west to Arizona. Among the Central American species are two, *D. dorsata* Har. and *D. nigrita* Jac.,

⁶ *Galleruca quadrinotata* Fabricius, Suppl. Ent. Syst., 1798, p. 98.

that at first glance might seem to be only color varieties of *glabrata*. They have approximately the same size, shape, smooth sculpture, and similar thoracic spotting and pale undersurface.

In *D. dorsata* (Fig. 2a), the lateral elytral margins and epipleura, as in *glabrata*, are usually entirely black, but instead of sutural and median vittae there is a large, round, black discoidal spot. There is another form of this species that might easily be confused with species of the *discoidea* group. This form has the margins and epipleura entirely pale and the discoidal spot is reduced. There is no median thoracic spot and the head is entirely pale. Dissection shows that it is merely a pale form of *dorsata*. To avoid future confusion, the writer is giving this color form the name

Disonycha dorsata, var. **flavolimbata**, n. var. (Fig. 2b).

Type (♂) and 2 paratypes (♂ and ♀).—Cat. No. 43362 U. S. N. M.

Type locality.—Honduras, collected by F. J. Dyer.

Other localities.—La Ceiba, Tegucigalpa, Honduras, collected by F. J. Dyer; Tela, Honduras, collected by C. Denton.

The second species, *nigrita* (Fig. 3), has entirely black elytra. Both *dorsata* and *nigrita* have aedeagi that are very similar to that of *glabrata*, but sufficiently unlike to be readily separable from that species and from each other.

Disonycha ovata n. sp. (Fig. 4).

Small (5 mm.), rounded oblong, shining, pale yellow without distinct occipital or pronotal spotting and with narrow black elytral submarginal, median, and sutural vittae, the submarginal one at apex broadening and becoming paler to form a washed-out apical spot on each elytron. Antennae, except for pale basal and apical joints, apex of tibiae, tarsi, and mouthparts, darkened but not black.

Head with broad smooth occiput, with distinct but not pronounced frontal tubercles, and a few coarse dense punctures near each eye; entirely pale except for a slight deepening in color on occiput and mouthparts. Antennae scarcely half the length of beetle (in ♀ shorter), four basal joints and last apical one pale, the remaining ones dark brown, third and fourth joints subequal. Prothorax considerably over twice as wide as long with slightly arcuate sides, moderately convex, smooth, very indistinctly and sparsely punctate, entirely pale yellow, although in one specimen with a slight darkening

indicative of the usual 5-spotted pronotal pattern of *Disonycha*. Scutellum dark. Elytra broadly rounded, somewhat convex, humeral prominences not marked. Surface shining, shallowly and moderately densely punctate. Vittae narrow, the submarginal one widened into a broad washed-out brown apical spot, scarcely uniting with sutural vitta. Epipleura and body beneath entirely pale, except for slight darkening at apex of tibiae and tarsi; finely pubescent.

Length.—4.8–5 mm., width 2.8–3 mm.

Type (♀) and 3 paratypes (♂s).—Cat. No. 43363 U. S. N. M. collected by Frederick Knab, August 1906.

Type locality.—San Salvador, Salvador.

This species is closely related to only one of those hitherto described from Mexico, Central America and North America, *Disonycha brevilineata* Jacoby,⁷ from Mexico. It is, however, smaller, than that species and entirely lacks the short apical stripe parallel to the median vitta. It is one of the smallest and roundest of the species of *Disonycha*, and notable because of its short, broad prothorax.

Systema basalis Duval.

Systema basalis Duval, Historia de la Isla de Cuba, vol. 7, 1856, p. 129.

Systema thoracica Jacoby, Biologia Centrali-Americana, vol. 6, pt. 1, 1884, p. 333.

This sexually dimorphic species, in which the elytral vitta is entire in the male and only faintly visible as a small spot at the base of the elytra in the female, has caused considerable confusion. Duval originally described the form that Jacoby later treated as a color variety of his *Systema thoracica*, that is, the form in which only a trace of the elytral vitta is visible. Suffrian⁸ states that Dr. Gundlach determined that these two forms are simply male and female of the same species.

Although the pale basal streak on the pronotum in the male specimens from the West Indies is not as clearly defined as in Central American specimens, there is in most West Indian specimens a poorly defined but evidently paler area at the base of the pronotum. Otherwise they do not differ. The species is represented in the National Museum by specimens from Cuba,

⁷ Biologia Centrali-Americana, vol. 6, pt. 1, 1884, p. 317.

⁸ Archiv. f. Naturg., vol. 33, 1868, p. 212.

Porto Rico, Haiti, and Jamaica in the West Indies, and from Nicaragua and Guatemala in Central America, and Tuxtla, Mexico.

Megistops dissita n. sp. (Fig. 6).

Small (3 mm.), ovate, pale reddish yellow with shining, dark blue, very finely punctate elytra; eyes not contiguous on occiput.

Head entirely pale reddish yellow, front very indistinctly punctate, eyes large, but not touching on occiput, the interocular space being nearly one-third width of head. Antennae about half length of body, filiform, pale reddish yellow, first three basal joints smooth, remainder closely covered with yellow pubescence, second and third joints much shorter than remainder. Prothorax not quite twice as wide as long, with apical angle on lateral margin somewhat widened and rounded, and basal margin slightly sinuate; surface moderately convex, reddish yellow with five very indistinct spots (not visible until specimen was soaked in warm water to cleanse), and with fine, close punctation as in *Megistops liturata* Oliv. Scutellum pale. Elytra rounded, convex, with slight humeral prominences, shining dark blue, very finely, sparsely punctate. Legs and body beneath entirely pale reddish yellow, the elytral epipleura darker brown. Posterior tibiae with the broad spur typical of the genera *Dibolia* and *Megistops*.

Length.—3 mm., width 2.3 mm.

Type (♀).—Cat. No. 43364 U. S. N. M.

Type locality.—Camp Perrin, La Prise, Haiti, collected by W. A. Hoffman, 26 July, 1925.

This species, described from a single specimen, is unique in the genus, so far as is known, in having the eyes distinctly separated on the occiput. The eyes are large, but the interocular space is plainly visible. Moreover the prothorax is longer and not as wide as in some other species of *Megistops*. The hind tibiae are armed with a broad spur as in both *Dibolia* and *Megistops*. Unlike the species of *Dibolia* the head is not sunken in the prothorax, but is plainly visible from above.

The genus *Megistops*, as described by Boheman,⁹ was based on two new species, *quadrinotatus* and *lugubrinus*. He gave the locality for both as St. Fransisco (sic) California. Neither of these species has since been found in North America, and the

⁹ *Eugenies Resa*, 1859, p. 186.

genus is not known to occur in the United States elsewhere. Puna Island and "St. Fransisco, California," are frequently coupled as type localities of species described in the same volume, but in the cataloguing of these species the locality San Francisco is usually dropped. Puna Island is on the coast of Ecuador, south of Cape San Francisco. It seems probable that in these cases there is a confusion of Cape San Francisco, Ecuador, with San Francisco, California. The expedition spent a week at the Island of Puna, and on resuming its voyage northward was retarded by calm and bad weather along the coast of Ecuador. It was anchored for a day off Cape Pasado, and the following day the position of the boat is given in the ship's log as in view of land north of Cape San Francisco. The expedition touched California at only one point, San Francisco, where it remained for a week.